

Time to develop

The length of time that an animal is pregnant is called its **gestation period**. It is the time from fertilisation to birth.

A mouse is pregnant for only three weeks. An elephant is pregnant for nearly two years!

Think about some reasons for a longer gestation period:

- the size of the baby animal. Larger offspring are made up of more cells and have grown a lot before birth.
- how well developed the baby is. There may be a high level of cell specialisation, which takes time.
- parental care. How independent is the newborn animal and what dangers will it have to face?

The table below shows data for the length of time that different animals are pregnant. The animals are in order of size.

- a** Plot a bar chart showing the gestation period for each animal. Put the animal along the x-axis (bottom) and gestation period on the y-axis (side).

Now look carefully at the pattern of the results.

- b** Describe the relationship between animal size and gestation period.
- c** Explain why you think this happens, using as much science as you can.
- d** Are there any results that look out of place?

Animal	Gestation period in days
mouse	21
squirrel	30
cat	62
kangaroo	40
ape	200
human	280
camel	355
rhino	420
elephant	649

- e** What do you already know about this animal that may explain why it doesn't fit the pattern?

- f** Can you predict the gestation period of a rabbit?

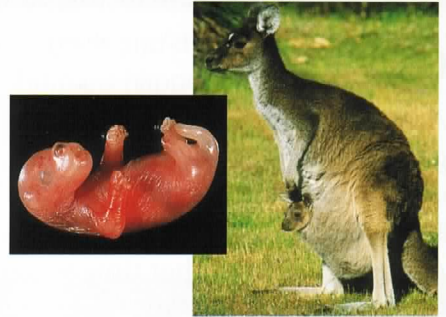
If you are not sure about the size of a rabbit it is difficult to predict its gestation period exactly using the bar chart.

Another way of analysing data is to plot a line graph. It is easier to predict using a line graph than a bar chart, but we need different data.

Think about:

- Looking at graphs

Did you know?



Kangaroos have a very short gestation period. They give birth after about five weeks, but the baby is still much too helpless to survive on its own. It crawls into a pouch and stays in there for another six months. The koala and wallaby also do this.

Did you know?

Rabbits have a shorter gestation period than humans. They can also have more babies at once. Rabbits have a double uterus, and each side can have several baby rabbits developing in it at the same time.

Predators and prey

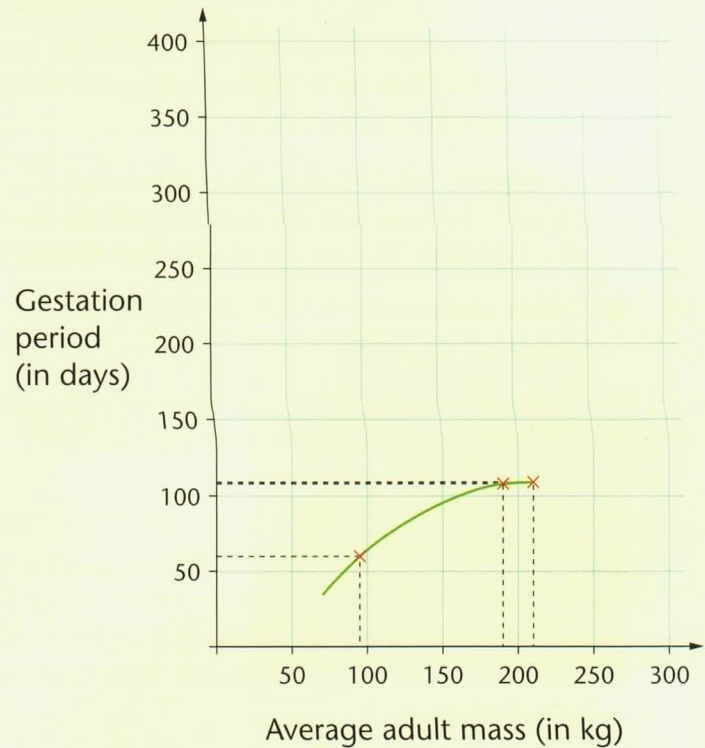
Here is some data for three more animals. They are all **predators**. This means that they hunt and eat other animals – their **prey**.

The line graph of this data on the right has adult mass **along** the x-axis and gestation period along the y-axis. You can predict the gestation period for a different animal, if you know its average adult mass.

The table below shows data for three prey animals.

- g Copy the graph and plot the data from the table on it. Join them with a curved line. Label this line 'prey'.
- h Do your graphs show a pattern? If so, describe it.
- i Which animals tend to have the longer gestation period compared with their body mass, predators or prey?
- j An impala has an average adult mass of 55 kg. What do you think its gestation period will be (an impala is a prey animal)?
- k Why do you think a line graph is useful?

Animal	Average adult mass in kg	Gestation period in days
cheetah	95	60
lion	190	108
tiger	210	109



Animal	Average adult mass in kg	Gestation period in days
antelope	45	180
wildebeest	200	255
zebra	280	360



When lions and tigers are born, they are blind and helpless for a week or so. They cannot move very far, so the mother has to stay in one place to look after them, or carry them around. A baby zebra is very different. It can walk with the rest of the herd only a few hours after it is born.

- l Prey animals are at risk from predators. Prey animals are pregnant longer than predators. Suggest two ways this helps the prey animals.

